iPodia Course Syllabus

Spring Semester 2015

# Principles and Practices of Global Innovation

This is an undergraduate elective course developed by USC and offered to other 5 iPodia partner universities as a part of **the iPodia Alliance** (www.ipodialliance.org) curriculum. Students register this iPodia course with a separate course number designated by their university (e.g., **ENGR345** for USC students), but learn interactively in iPodia classrooms and work collaboratively in small study cohorts and project teams across physical, institutional, and cultural boundaries throughout the semester. All registered students from participating universities follow the same course syllabus and are evaluated by the same academic requirements "*as a single class*".

The topic of this iPodia course is "**Principles and Practices of Global Innovation**" which consists of three interrelated types of learning activities, namely (1) lectures-and-discussions, (2) cross-cultural exercises, and (3) innovation team projects. There is also an optional component at the beginning and the end of the semester, when interested students have the opportunity to travel overseas to meet their global classmates and experience different cultures to inspire global innovations. All details of these learning components are explained in this course syllabus.

## 1. Participating Universities:

The lead university of this 2015 spring iPodia course is:

- University of Southern California (**USC**) in Los Angeles, USA
  - The targeted enrollment at USC is 40 students in 2 separate sessions on 1 campus

iPodia universities which participate in this spring 2015 iPodia class include:

- Israel Institute of Technology (**Technion**) in Haifa, Israel
  - The targeted enrollment at Technion is 20 students in 1 session on 1 campus
- Birla Institute of Technology and Science (**BITS**) in Hyderabad and Goa, India
  - The targeted enrollment at BITS is 30 students in 1 session on 2 separate campuses
- Peking University (**PKU**) in Beijing, China
  - The targeted enrollment at PKU is 20 students in 1 session on 1 campus
- Tsinghua University (**THU**) in Beijing, China
  - The targeted enrollment at THU is 20 students in 1 session on 1 campus
- Korea Advance Institute of Science and Technology (**KAIST**) in Daejeon, S. Korea
  - The targeted enrollment at KAIST is 20 students in 1 session on 1 campus

The total targeted enrollment of this global class is 150 students at six iPodia universities on seven different campuses across three continents.

## 2. Enrollment Requirements:

This iPodia course is offered to sophomore/Junior/Senior students at participating iPodia universities with good academic standing, communication and collaboration skills, international interests, and strong appreciations of cross-cultural learning. While some technical background is helpful, no particular disciplinarily specialty is required to attend this course. Class enrollment is limited on each campus (see Section 1 above) to ensure full participation and direct peer-to-peer interaction. Participating iPodia universities can decide on their respective enrollment criteria and admission process. For example, USC students must apply and be competitively interviewed before registration. Auditing without enrollment is not permitted in this course.

## 3. Course Unit:

Specific units (or credits) for this iPodia course are determined by each participating iPodia university according to local curriculum requirements. As an example, all registered USC students receive 3 Units upon the successful completion of this undergraduate elective course.

## 4. Participating Faculty, Course Responsibilities, and Office Hours:

- **USC** Professor Stephen Lu sclu@usc.edu
  - Responsibilities: Introduction, lectures-discussions of innovation principles
  - Office Hours: 5:00pm to 6:00pm, on Thursdays (local time)

  Professor Ang Liu (iPodia Manager) angliu@usc.edu
  - Responsibilities: Class coordination, program management, team projects
  - Office Hours: 5:00pm to 6:00pm, on Thursdays (local time)
- **Technion** Professor Miriam Erez merez@ie.technion.ac.il
  - Responsibilities: (Session A) Cross-cultural exercises II and III
  - Office Hours: ??? to ???, on ??? (local time)
- **BITS** Professor Suman Kapur (Hyderabad Campus)skapur@hyderabad.bits-pilani.ac.in
  - Responsibilities: (Session A) Cross-cultural exercise I
  - Office Hours: ??? to ???, on ??? (local time)

  Professor Dr. Debasis Patnaik (Goa Campus) marikesh@goa.bits-pilani.ac.in
  - Responsibilities: Local coordination and supervision
  - Office Hours: ??? to ???, on ??? (local time)
- **PKU** Professor Xiaoyun Xu xiaoyun.xu@gmail.com
  - Responsibilities: Local coordination and supervision
  - Office Hours: ??? to ???, on ??? (local time)
- **THU** Professor Benjamin Koo koo0905@gmail.com
  - Responsibilities: (Session B) Cross-cultural exercise III and overseas visit
  - Office Hours: ??? to ???, on ??? (local time)
- **KAIST** Professor James Morrison james.morrison@kaist.edu
  - Responsibilities: (Session B) Cross-cultural exercises I and II
  - Office Hours: ??? to ???, on ??? (local time)

## 5. Teaching Assistants and Office hours:

- **USC (Morning Session A)** ??? ???@usc.edu
  - Office Hours: ??? to ??:00am, on ??? (local time)
- **USC (Evening Session B)** ??? ???@usc.edu
  - Office Hours: ??:00 to ??:30, on ??? (local time)
- **Technion** ??? ???@tx.technion.ac.il
  - Office Hours: ??? to ???, on ??? (local time)
- **BITS** ??? (Hyderabad) ???@???
  - Office Hours: ??? to ???, on ??? (local time)

  Goa Campus TBD ???@???
  - Office Hours: ??? to ???, on ??? (local time)
- **PKU** ??? ???@???
  - Office Hours: ??? to ???, on ??? (local time)
- **THU** ??? ???@???
  - Office Hours: ??? to ???, on ??? (local time)
- **KAIST** ??? ???@kaist.ac.kr
  - Office Hours: ??? to ???, on ??? (local time)

## 6. Class Organization:

This iPodia global class has a total of 150 students from six universities on seven different campuses. To manage the time differences at multiple locations, the class organized as two **Class Sessions** to enable close collaboration and synchronized in-class interactions. Each Class Session includes 3 (or 4) participating universities as shown in the following Table. Two hours in-class meeting is schedule weekly for each Class Session. Students attend weekly lecture-discussion, engage in cross-cultural exercise, and work on team innovation projects with classmates in their own Class Sessions, although all learning materials, exercises, online discussions are the same for both sessions. Class Session A meets from 7:30-9:30am (and 8:00-10:00am after the daylight saving time in USA and Israel), and Class Session B meets at 6:00-8:00pm (and 7:00-9:00pm after the daylight saving time in USA and Israel) on Thursdays (both PDT).

| Class Session | USC (A) | Technion | BITS | USC (B) | PKU | THU | KAIST |
|---|---|---|---|---|---|---|---|
| **A** | 20 students | 20 students | 30 students | | | | |
| **B** | | | | 20 students | 20 students | 20 students | 20 students |

Note that although the formal instruction of this iPodia class starts on 2/5/2014 (PDT), students from participating iPodia universities will join live classroom lectures at different points shown below (with indicated time zones) due to different local campus academic calendars.

- USC (Sessions A and B) – starts on 2/5/2015 (GMT-8; DST; 3/8/2015-: GMT-7 no-DST)
- BITS (Session A) – starts on 2/5/2015 (GMT+5:30; no DST)
- PKU (Session B) – starts on 3/06/2015 (GMT+8; no DST)
- THU (Session B) – starts on 3/06/2015 (GMT+8; no DST)
- KAIST (Session B) – starts on 3/6/2015 (GMT+9; no DST)
- Technion (Session A) – starts on 3/19/2015 (GMT+2; DST: 3/27/2014-: GMT+3 no-DST)

Before their campuses become live online, interested students are encouraged to participate in weekly classroom lectures online, in either synchronized or asynchronized mode, via the WebEx system (www.webex.com) arranged by USC.

At the beginning of the semester, students in each Class Session are divided into small teams across multiple campuses (see the Table below). These 20 cross-campus teams will work closely with their team members in weekly lectures-discussions and innovation projects throughout the entire semester. (Note that all students from the same university will work together as a "Cultural Group" during the cross-cultural exercise.) One member in each team will be designated as the "team coordinator". The purpose of this cohort arrangement is to promote deep collaboration among a small number of students from multiple universities to enhance their cross-cultural appreciation of the subject and mutual understanding of each other.

| Team | USC- (A) | Technion | BITS | USC- (B) | PKU | THU | KAIST |
|---|---|---|---|---|---|---|---|
| **A-1** | 2 students | 2 students | 3 students | | | | |
| **A-2** | 2 students | 2 students | 3 students | | | | |
| **A-3** | 2 students | 2 students | 3 students | | | | |
| **A-4** | 2 students | 2 students | 3 students | | | | |
| **A-5** | 2 students | 2 students | 3 students | | | | |
| **A-6** | 2 students | 2 students | 3 students | | | | |
| **A-7** | 2 students | 2 students | 3 students | | | | |
| **A-8** | 2 students | 2 students | 3 students | | | | |
| **A-9** | 2 students | 2 students | 3 students | | | | |
| **A-10** | 2 students | 2 students | 3 students | | | | |
| **B-1** | | | | 2 students | 2 students | 2 students | 2 students |
| **B-2** | | | | 2 students | 2 students | 2 students | 2 students |
| **B-3** | | | | 2 students | 2 students | 2 students | 2 students |
| **B-4** | | | | 2 students | 2 students | 2 students | 2 students |
| **B-5** | | | | 2 students | 2 students | 2 students | 2 students |
| **B-6** | | | | 2 students | 2 students | 2 students | 2 students |
| **B-7** | | | | 2 students | 2 students | 2 students | 2 students |
| **B-8** | | | | 2 students | 2 students | 2 students | 2 students |
| **B-9** | | | | 2 students | 2 students | 2 students | 2 students |
| **B-10** | | | | 2 students | 2 students | 2 students | 2 students |

## 7. What Will Students Learn from This iPodia Class?

Participating iPodia Alliance member universities work together to plan, develop, and offer various iPodia courses jointly through iPodia classrooms on their own campuses. A typical iPodia course focuses on a "**socio-technical**" topic with international perspectives and global significances, where social interactions and cultural diversities influence various technical, business, and policy decisions. Students enrolled in this 2015 spring iPodia course on seven campuses study the topic of "***Principles and Practices of Global Innovation***" together. The instruction of this iPodia class is organized around the following learning activities each week:

A. Lectures and Discussions (of global innovation principles)
B. Cross-cultural Exercises (of global innovation perspectives)
C. Innovation Team Projects (of global innovation practices)
D. (**Optional**) Overseas Experiences (of global innovation experiences)

More details of these different learning activities are explained in Section 8 below. A summary of weekly instruction subject and learning activity for a semester of 17 weeks (from 2/5/2015 to 5/30/2015) is listed as follow.

| Week | Instruction Subject | Learning Activity | Responsible Faculty |
|---|---|---|---|
| **1** | Course introduction (an overview of iPodia; the iPodia Pedagogy; and the iPodia Alliance) | Lectures-Discussions | USC – Prof. S. Lu |
| | PKU and some TUH students are on USC campus *(TBD – either weeks 1 and 2 or weeks 3 and 4)* | Overseas Experience | USC – Prof. A. Liu |
| **2** | Technology innovation and its interaction with market competition (characteristics of open technological innovation in competitive global market; the S-curve to describe market lifecycle of technology innovation) | Lectures-Discussions | USC – Prof. S. Lu |
| | PKU and some TUH students are on USC campus *(TBD – either weeks 1 and 2 or weeks 3 and 4)* | Overseas Experience | USC – Prof. A. Liu |
| **3** | The innovation phase on the early market (standard battles to shape dominant design of new technology; cross-the-market-Chasm; and timing of market entry) | Lectures-Discussions | USC – Prof. S. Lu |
| | PKU and some TUH students are on USC campus *(TBD – either weeks 1 and 2 or weeks 3 and 4)* | Overseas Experience | USC – Prof. A. Liu |
| **4** | The competition phase on the mainstream market (competitive strategies in different market segments; the Segment-Zero Principle; hyper competitions lead to oversupply of technology performance) | Lectures-Discussions | USC – Prof. S. Lu |

| | | | |
|---|---|---|---|
| | PKU and some TUH students are on USC campus *(TBD – either weeks 1 and 2 or weeks 3 and 4)* | Overseas Experience | USC – Prof. A. Liu |
| **5** | The commoditization phase on the late market (modularization and commoditization of technology; strategy/consequence of out-sourcing and off-shoring) | Lectures-Discussions | USC – Prof. S. Lu |
| **6** | Blue-ocean innovation strategy for new breakthrough products (the Kano Model of Customer Satisfaction; real-world examples by disturbing supply chains, uncovering new FRs, exploring hidden resources, etc.) | Lectures-Discussions | USC – Prof. S. Lu |
| **7** | The Innovative Design Thinking framework for new breakthrough products (focus on the functional design stage to soliciting customer voices and discover breakthrough innovation opportunities) | Lectures-Discussions | USC – Prof. S. Lu |
| | Student Innovation Team Projects Begin - 0 | Team Project | USC – Prof. A. Liu |
| **8** | Use QFD (Quality Function Deployment) Method and other techniques to solicit the voices from customers | Lectures-Discussions | USC – Prof. S. Lu |
| | Student Innovation Team Projects Continue - I | Team Project | USC – Prof. A. Liu |
| **9** | Cross-cultural Exercise I (Students in two sessions will conduct this exercise separately with their session classmates led by different university) | Cross-Cultural Exercise | Session A by BITS – Prof. S. Kapur; Session B by KAIST – Prof. J. Morrison |
| | Student Innovation Team Projects Continue - II | Team Project | USC – Prof. A. Liu |
| **10** | Team exercise of the QFD method and VoC techniques with innovation projects (A) | Discussions w/ Practice | USC – Prof. S. Lu |
| | Student Innovation Team Projects Continue - III | Team Project | USC – Prof. A. Liu |
| **11** | Cross-cultural exercise II (Students in two sessions will conduct this exercise separately with their session classmates led by different university) | Cross-Cultural Exercise | Session A by Technion – Prof. M. Eriz; Session B by KAIST – Prof. J. Morrison |
| | Student Innovation Team Projects Continue - IV | Team Project | USC – Prof. A. Liu |
| **12** | Team exercise of the QFD method and VoC techniques with innovation projects (B) | Discussions w/ Practice | USC – Prof. S. Lu |
| | Student Innovation Team Projects Continue - V | Team Project | USC – Prof. A. Liu |
| **13** | Cross-cultural exercise III (Students in two sessions will conduct this exercise separately with their session classmates led by different university) | Cross-Cultural Exercise | Session A by Technion – Prof. M. Eriz; Session B by Tsinghua Univ – Prof. B. Koo |

| | | | |
|---|---|---|---|
| | Student Innovation Team Projects Continue - VI | Team Project | USC – Prof. A. Liu |
| **14** | Final Presentations of Project Results by Student Innovation Teams | Team Project | All iPodia Faculty |
| **15** | Travel from home campuses to China | n/a | (no class this week) |
| **16** | Week 1 in Beijing, China | Overseas Experience | Tsinghua University – Prof. B. Koo |
| **17** | Week 2 in Beijing, China | Overseas Experience | Tsinghua University – Prof. B. Koo |

## 8. How Will Students Learn in This iPodia Class?

Students learn interactively and collaboratively in this iPodia class through the following learning activities:

### (A): Lectures and Discussions

The purpose of this learning activity is to help students gain understanding of the basic principles which govern open technology innovations on competitive global markets. Following iPodia's inverted learning pedagogy, content materials of these key principles will be distributed online to all students for pre-class studies, discussions, and feedbacks. During the 2-hour live class meeting time each week, the instructor will further clarify some difficulty concepts based on students' feedbacks and lead in-class live discussions among cross-campus teams. Professor Stephen Lu of USC will be responsible for this learning activity according to the following plan:

- Content materials for weekly lectures are organized into 4 to 5 key concepts, each is clearly explained by 5-6 PowerPoint slides with animations.
- This collection of 20-30 slides will be posted on the Piazza System (www.piazza.com) via the iPodia Alliance Portal at www.ipodialliance.org (see Section 10 below for details) at least 72 hours (3 days) before the in-class time for all students to preview and study at home.
- At the same time, a specific discussion area for each key concept will be created on the Piazza System for students to exchange Q/As and help each other as they study these content materials before the class.
- While studying these slides by themselves before the class, students are required to complete the following three tasks on the Piazza System at least 24 hours (1 day) before the class begins:
  1) Complete a short quiz on the Piazza System to indicate that they have actually studied and learned the content materials in these slides.
  2) Give online feedback by filling out a "Pain Index" survey (i.e., very easy, easy, average, hard, very hard) to indicate how easy/difficulty was for them to understand a particular key concept.
  3) Contribute to, and participate in, the pre-class discussion and exchange of Q/As on the Piazza System. All these pre-class discussion participations are tracked and recorded.

- During the live class time in each session, the instructor will explain the details of some of the more difficult slides based on students' online feedbacks. 10-20 minutes "pondering time" will be allocated during the 2-hour class time for students to engage in Q/As with their cross-campus teams via the Bluejeans System at www.bluejeans.com (see Section 10 for details).
- After the class ends, all students are encouraged to continue their discussions and exchanges of further Q/As via the Bluejeans System. All after-class discussion participations are tracked and recorded, and will be compared with those pre-class discussions.
- Students whose campuses are in formal session are required to attend these weekly classes in person. All in-class lectures and discussions will be recorded live and posted on USC's DEN Blackboard System (www.uscden.net) afterwards for review by all interested students.
- Before their semesters begin, interested students can choose to participate in live classes from their laptops at home via the WebEx System arranged by USC and/or view the lecture recordings posted on the DEN Blackboard System (www.uscden.net) any time after the class.
- Regardless the different modes of class participation, all students in both class sessions are required to complete the study of all content lectures and the three online tasks listed above.

**(B): Cross-cultural Exercises**

Cultural diversities among different customers, societies and markets, when properly understood and creatively explored and leveraged, can become an inspirational source for global innovations. This requires students to have the ability to deeply appreciate, and be inspired by, the similarities and dissimilarities of human beliefs, customer preferences, and market trends across societal, cultural, and historical boundaries. Therefore, three cross-cultural exercises are planned (on weeks 9, 11, and 13) for each class session in this iPodia class to help developing students' appreciation of cultures other than their own, and enhance their intercultural competence.

- For Class Session A, three cross-cultural exercises are scheduled on April 2nd, 16th, and 30th (all PDT) among all USC-morning, Technion, and BITS students. Professor Suman Kapur of BITS will be responsible for the 1st exercise, and Professor Miriam Erez of Technion will be responsible for the next 2 exercises. USC, Technion, and BITS students will work with their classmates on the same campus to complete the assignments and engage in interactive exercises. Details will be announced at a later time.

- For Class Session B, three cross-cultural exercises are scheduled on April 2nd, 16th, and 30th (all PDT) among all USC-evening, PKU, THU, and KAIST students. Professor Morrison of KAIST will be responsible for the first 2 exercises, and Professor Benjamin Koo of Tsinghua University will be responsible for the 3rd one. USC, PKU, THU, and KAIST students will work with their classmates to complete the assignments and engage in interactive exercises. Details will be announced at a later time.

**(C): Innovation Team Projects**

Besides supervised interactions to gain contextual understandings of global innovation principles and practices as well as cross-cultural exercises to develop mutual understandings, all students are also required to participate in innovation projects with their cross-campus teams outside the class time during the second half of the semester. This team project experience helps students to apply what they have learned in class to develop innovative ideas to demonstrate that cultural diversities can inspire global innovations. It also gives them the opportunity to experience the challenges and opportunities of working in globally distributed projects and teams.

As explained in Section 6 above, the entire class is divided into 20 small teams (each with 7 or 8 members) across the six participating universities on seven campuses. The innovation team projects starts on Week 7 of the semester and will last for 7 weeks. During this period, students in each project team will go through the specific methods and steps, which they have learned in class with their teammates, to develop innovative ideas that address the needs of "***How to Make Campuses Green?***" Innovation teams will apply the knowledge and skills they have learned to collaborate outside the class time during this period to:

- solicit customer voices to discover innovation opportunities,
- define product specifications to select innovation targets, and
- ideate some creative preliminary concepts which can be further developed later

The final results of their innovation team projects will be presented during Week 14. These innovation project results will be evaluated according to the following criteria:

- **Functionality** – will it really work well? (20%)
- **Usability** – how useful it is, and is it easy to use? (10%)
- **Feasibility** – how likely it can be implemented with existing technologies? (20%)
- **Affordability** – how expensive it is to build and maintain? (20%)
- **Novelty** – how different it is from existing or other solutions? (30%)

More details of these innovation team projects will be announced before Week 7.

**(D): (Optional) Overseas Experiences**

Details of this optional learning component will be provided by the hosting iPodia university, the Tsinghua University in Beijing, China, at a later time.

## 9. Textbook and Reading Materials:

This iPodia class focuses on nurturing generic innovation ability and creative design thinking rather than teaching specific disciplinary knowledge. The key emphasis is on the cross-cultural aspects of socio-technical subjects with an emphasis on systematic thinking methods for technological innovation in light of rapid globalization. Because cultural and contextual

understandings cannot be taught via lectures and learnt from textbook (but rather, it can be best acquired from studies of examples and exercises through teamwork) and due to the broad scope and diverse coverage of this subject, *no required textbook is assigned*. Instead, a variety of reference books, papers, and videos will be recommended and periodic handouts will be given in the class.

## 10. Online Learning Supports:

To enhance and supplement interactive learning in-class and collaborative teamwork outside-class, the following eLearning facilities/tools will be used in this iPodia course. All students enrolled in this iPodia class on the five campuses will login the iPodia Alliance portal at www.ipodialliance.org, from which they will have links to enter and use these eLearning tools (with separate usernames and passwords). As the lead institution of this class, USC will manage and support the access to these eLearning facilities.

- **Blackboard System** by USC Distance Education Network (DEN) via www.uscden.net
  - For all students to view and review all audio/video recordings of live classes
- **WebEx** Meetings System by Cisco at http://www.webex.com
  - USC will provide WebEx for those interested PKU, Technion, and KAIST students to participate in live class lectures prior to the start of their semesters (optional)
- **Piazza** Online Class Interaction System at www.piazza.com
  - For all class-relation information, syllabus, rosters, announcements, pre-class slides for content lectures, online quizzes, pain-index survey feedbacks, pre-class and after-class discussions, polling and participation statistics, etc.
- **Bluejeans** Multipoint Videoconferencing at www.bluejeans.com
  - In-class live interactions among members of study groups, and outside-class collaborations among members of project teams, recording and analysis of group/team member interactions, etc.

Although the Bluejeans system is preferred and should be used whenever possible, project teams may choose any online communication and collaboration tools they prefer to conduct their virtual meetings outside the class time. Each team will manage the access by themselves; no central support will be provided for these virtual meeting facilities outside the class time.

## 11. Grading Scheme:

All USC, PKU, TUH, KAIST, BITS and Technion students who registered in this iPodia class will be graded together at the end of the semester according to the following grading scheme.

- **30%** Participation/contribution to lecture-discussion (live Q/A and online discussions)
- **30%** Participation/contribution to cross-cultural exercises
- **30%** Participation/contribution to outside-class innovation projects in project teams
- **10%** Peer-assessment on how others have learnt from you during the semester

Note that, due to the peer-to-peer pedagogy, 60% of your semester grade is based on the results of students' collaborative work in study and project teams with other classmates. All works done by groups or teams are first given a team grade. This grade is then weighted for each student, based on confidential self-evaluations by all group/team members at the end of the semester. Each student will be asked to fill out a questionnaire, which evaluates every member (including him/herself) for the percentage of contribution to the collaborative work in different categories. The evaluations are averaged in order to determine each student's contribution and the weighting factor is made proportional to the average. As well, in order to encourage and reward "peer-to-peer" learning (10% of the final grades), all students are asked in this questionnaire to evaluate how much he/she has learnt (and benefited) from each of his/her classmates throughout the semester during various learning activities.

## 12. Class Schedule:

| | Session A (20 USC morning + 20 Technion + 30 BITS/2 campuses) | | | | | | Session B (20 USC evening + 20 KAIST + 30 THU & PKU) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Technion | | BITS (2 campus) | | USC (Morning) | | Weekly Instruction and Learning Plan | | USC (Evening) | | THU & PKU | KAIST |
| 1 | 2/05 | 5:30-7:30p | 2/05 | 9-11p | 2/05 | 7:30-9:30a | *Introduction of iPodia, the iPodia pedagogy, and the iPodia Alliance* | | 2/05 6-8p | | 2/06 10a-12p | 2/06 11a-1p |
| 2 | 2/12 | 5:30-7:30p | 2/12 | 9-11p | 2/12 | 7:30-9:30a | Technology innovation and its interaction with market competition | | 2/12 6-8p | | 2/13 10a-12p | 2/13 11a-1p |
| 3 | 2/19 | 5:30-7:30p | 2/19 | 9-11p | 2/19 | 7:30-9:30a | Principles that govern the innovation phase on the early market | | 2/19 6-8p | | 2/20 10a-12p | 2/20 11a-1p |
| 4 | 2/26 | 5:30-7:30p | 2/26 | 9-11p | 2/26 | 7:30-9:30a | Principles that govern the competition phase on the mainstream market | | 2/26 6-8p | | 2/27 10a-12p | 2/27 11a-1p |
| 5 | 3/05 | 5:30-7:30p | 3/05 | 9-11p | 3/05 | 7:30-9:30a | Principles that govern the commoditization phase on the late market | | 3/05 6-8p | | 3/06 10a-12p | 3/06 11a-1p |
| 6 | 3/12 | 5-7p | 3/12 | 8:30-10:30p | 3/12 | 8-10a | Blue-ocean innovation strategy for new breakthrough products | | 3/12 7-9p | | 3/13 10a-12p | 3/13 11a-1p |
| 7 | 3/19 | 5-7p | 3/19 | 8:30-10:30p | 3/19 | 8-10a | The Innovative Design Thinking framework for breakthrough products | | 3/19 7-9p | | 3/20 10a-12p | 3/20 11a-1p |
| 8 | 3/26 | 5-7p | 3/26 | 8:30-10:30p | 3/26 | 8-10a | QFD method and other techniques to solicit the voices from customers | | 3/26 7-9p | | 3/27 10a-12p | 3/27 11a-1p |
| 9 | 4/02 | 6-8p | 4/02 | 8:30-10:30p | 4/02 | 8-10a | *Cross-cultural Exercise I - A* | *Cross-cultural Exercise I - B* | 4/02 7-9p | | 4/03 10a-12p | 4/03 11a-1p |
| 10 | 4/09 | 6-8p | 4/09 | 8:30-10:30p | 4/09 | 8-10a | Team exercises of the QFD method and VoC techniques (1) | | 4/09 7-9p | | 4/10 10a-12p | 4/10 11a-1p |
| 11 | 4/16 | 6-8p | 4/16 | 8:30-10:30p | 4/16 | 8-10a | *Cross-cultural Exercise II - A* | *Cross-cultural Exercise II - B* | 4/16 7-9p | | 4/17 10a-12p | 4/17 11a-1p |
| 12 | 4/23 | 6-8p | 4/23 | 8:30-10:30p | 4/23 | 8-10a | Team exercises of the QFD method and VoC techniques (2) | | 4/23 7-9p | | 4/24 10a-12p | 4/24 11a-1p |
| 13 | 4/30 | 6-8p | 4/30 | 8:30-10:30p | 4/30 | 8-10a | *Cross-cultural exercise III - A* | *Cross-cultural exercise III - B* | 4/30 7-9p | | 5/01 10a-12p | 5/01 11a-1p |
| 14 | 5/07 | 6-8p | 5/07 | 8:30-10:30p | 5/07 | 8-10a | *Final presentation of innovation project results by student teams* | | 5/07 7-9p | | 5/08 10a-12p | 5/08 11a-1p |
| 15 | 5/14 | 6-8p | 5/14 | 8:30-10:30p | 5/14 | 8-10a | Student Travel Day – No Class | Student Travel Day – No Class | 5/14 7-9p | | 5/15 10a-12p | 5/15 11a-1p |
| 16 | 5/18-5/24 | | 5/18-5/24 | | 5/18-5/24 | | Global Innovation Experience @ Tsinghua University in Beijing, China | | 5/18-5/24 | | 5/18-5/24 | 5/18-5/24 |
| 17* | 5/25-5/30 | | 5/25-5/30 | | 5/25-5/30 | | Global Innovation Experience @ Tsinghua University in Beijing, China | | 5/25-5/30 | | 5/25-5/30 | 5/25-5/30 |

*Yellow highlighted date/time indicate remote students can attend live lectures online OR watch recorded lectures at their free time before joining live classes.*

*Indicating that students will visit Los Angeles and join live lectures in iPodia Classroom on USC campus. (Details TBD)*

*Thick border date/time indicate local holidays on different campuses. Students can still participate in scheduled activities live from their laptops if they so choose.*

* *After the iPodia class formally ends on 5/30/2015, faculty may choose to continue some separate instructions according to their own academic calendar requirements.*

## What is the iPodia Pedagogy?

iPodia, where "i" stands for "inverted", "interactive", and "international", is a new global education pedagogy developed by Professor Stephen Lu in 2009 based on his vision of "*learning together for a better world*." Inverted learning in iPodia goes beyond the flipped classroom, using students' feedback on course contents to promote peer-to-peer collaborations and help teachers guide classroom interactions. iPodia's interactive learning transforms distance education to no-distance learning by eliminating the interaction distance among students, rather than maximizing the delivery distance of lectures. iPodia's interactional learning exploits cultural diversity as learning sources and provides global learning experiences on local campus as a "right for the many", not just a "privilege for the few".

The iPodia pedagogy is based on three basic premises: (1) contextual understanding is best achieved via direct engagements, hence the "inverted" learning, (2) what you learn depends on with whom you learn, hence the "interactive" learning, and (3) diversity increases learning opportunity for everyone, hence the "international" learning.

In regards to the first premise, context is what one uses to make sense of subject content while learning and practicing. Unlike content, which can be taught by teachers with lectures, contextual understanding can only be co-constructed when learners engage with each other. In the conventional learning process, students are first being lectured on using subject content in school, and are then asked to exercise problem solving at home to develop contextual knowledge by themselves. iPodia inverts the traditional schoolwork and homework process, and uses online feedback to promote students' peer-to-peer tutoring and guide teacher's class preparations before the class. Students study the course subject at home via online lectures (including relevant MOOC materials), help each other during the content study before attending class, and then engage in guided collaborative activities with their classmates to develop contextual understanding. This is why the "i" in iPodia stands for inverted learning.
The second premise states that subject content can be learned "from" teachers but contextual understanding is developed "with" peers. Thus, contextual learning derives from the interactions with whom they study. The above inverted process transforms the learning paradigm from passive (i.e., be lectured on) into active (i.e., to participate in.) By turning the "learning-from" into a "learning-with" pedagogy, iPodia takes the active learning approach further, emphasizing interactive learning. Unlike traditional distance education that uses IT to expand the delivery distance between teachers and students, iPodia's "no-distance" learning approach utilizes IT to eliminate the physical distance that hinders interaction between remote learners. Therefore, the "i" in iPodia stands for interactive learning.

Third, if what we learn depends on the people with whom we learn, then our learning opportunities are increased when we study with a diverse group of learners from different social and cultural backgrounds. Thus, iPodia focuses on inter-cultural learning, linking classrooms on multiple campuses in different countries and culture regions around the world. This international dimension enables students to interact with, and learn from, global classmates right on their home campuses. Students are more comfortable interacting openly and freely with their foreign

peers in iPodia classes because they feel (and in fact are) at home! This is why the "i" in iPodia also stands for international learning.

## What is the iPodia Alliance?

The iPodia Alliance (www.ipodiallaince.org) is an independent global consortium among leading universities to promote the iPodia pedagogy and establish a "classrooms-without-borders" paradigm for the 21st century higher education. The iPodia Alliance establishes a global learning hub around the world, creating joint classrooms and shared educational resources. iPodia students learn with, and from, each other across disciplinary, physical, institutional and cultural boundaries. iPodia learning outcomes include contextual understanding with global perspectives and mutual understanding of each other. As MOOCs (massively open online courses) moves classroom lectures from campuses to the Cloud, iPodia moves student interactions from the Cloud to classrooms on campus.

The Alliance was initiated by USC's Viterbi School of Engineering. Current membership includes:

1. University of Southern California in Los Angeles, USA
2. Peking University in Beijing, China
3. National Taiwan University in Taipei, Taiwan
4. Korea Advanced Institute of Science and Technology in Daejeon, South Korea
5. Israel Institute of Technology in Haifa, Israel
6. RWTH Aachen University in Aachen, Germany
7. India Institute of Technology - Bombay in Mumbai, India
8. Escola Politécnica da Universidade de São Paulo in São Paulo, Brazil
9. Birla Institute of Technology and Science - Pilani, in Hyderabad, India
10. Qatar University in Doha, the State of Qatar
11. Tsinghua University in Beijing, China

The Alliance via USC Viterbi iPodia Program (www.ipodia.usc.edu) also works with Makerere University in Kampala, Uganda to enrich transcultural learning opportunities for iPodia students. A few more institutions in Middle East, Russia, etc., are being invited to join the iPodia Alliance.

There are three principles that govern the operations of the iPodia Alliance. First, the "equal-reciprocity" principle encourages members to strive for balance between iPodia courses offered to and received from the Alliance within a certain period. This ensures that the benefits of equal contribution can be shared among all participating members. Second, the "revenue-neutral" principle holds that members are responsible for the costs incurred by their participation in all activities, and no money (e.g., tuitions, etc.) will change hands between any Alliance members. This promotes a not-for-profit culture, which will allow Alliance members to focus on collaborative win-win contributions. Finally, the "not-joint-degree" principle states that the Alliance's main goal is to share courseware development and collaborate on course delivery, rather than to create joint degrees among its member universities. This enables all Alliance members to maintain the independence and uniqueness of their curricula, which form the basis for their valuable contributions to the Alliance.